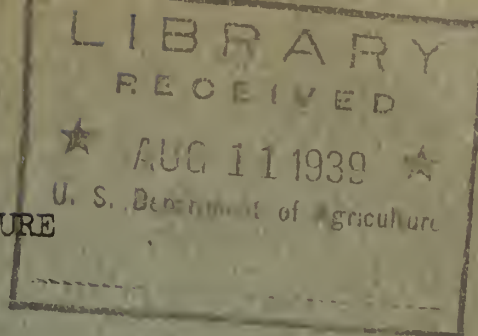


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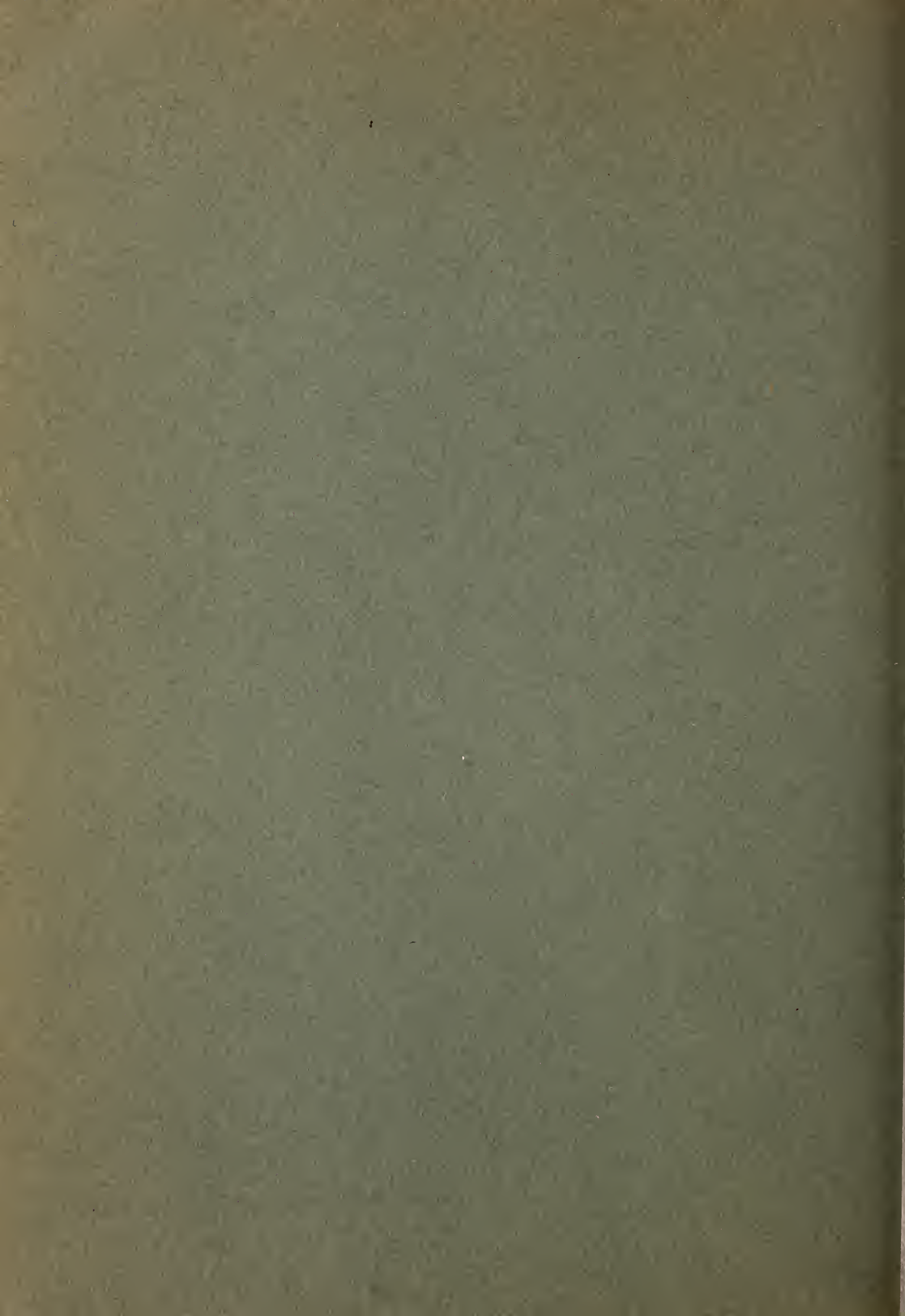
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Region Eight
Albuquerque, New Mexico



Hugh G. Calkins
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POPULATION OF THE UPPER RIO GRANDE WATERSHED

Regional Bulletin No. 43
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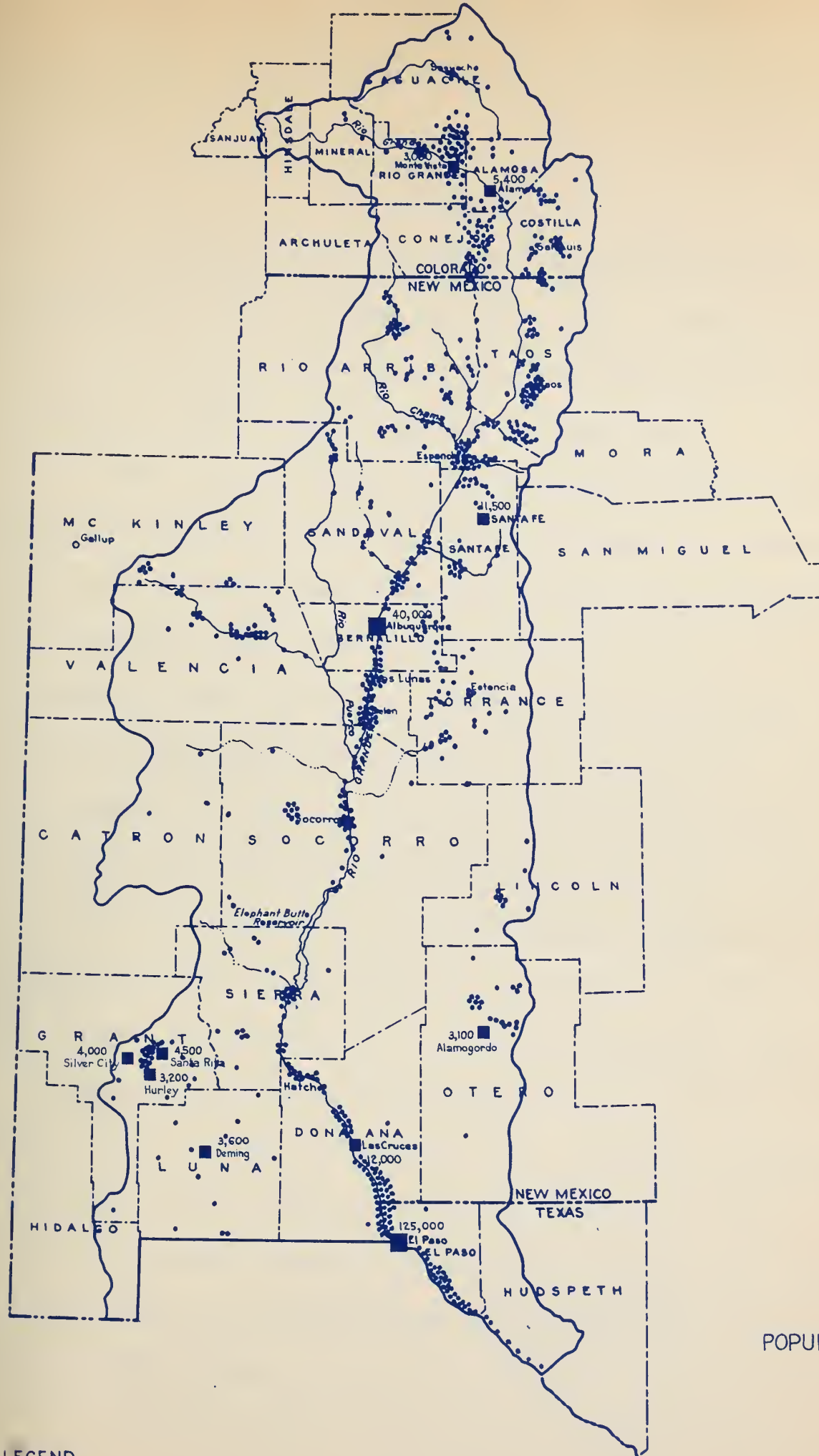


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POPULATION

LEGEND

- 3,600 Urban Area
- Each dot = 200 persons

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
RIO GRANDE WATERSHED
1937

POPULATION

Consideration of the changes in the number, distribution and composition of the population of the area of primary consideration of the Committee affords a number of clues to the problem of resources, their adequacy and use, in that area.

In 1850 the area which is now the area of primary consideration of the Committee, that section of the Upper Rio Grande Watershed lying between Elephant Butte Lake and the Colorado State line, contained a population of approximately 54,500. Of these approximately 6,400 were Indians who had inhabited the area from prehistoric times, approximately 47,000 were Spanish-Americans whose occupation of the area dated back almost two centuries, and between 1,000 and 1,500 were Anglo-Americans, most of whom had come into the area in the preceding decade. Outside of this area there were only 7,000 persons in all of what is now the State of New Mexico, most of them in the area surrounding Las Vegas.

Changes in the total population of the area, which for purposes of this comparison is taken to be the present counties of Taos, Rio Arriba, Santa Fe, Sandoval, Bernalillo, Socorro, and Valencia, are shown in Table I and Figure I. In the same table are shown changes in the population of the remainder of New Mexico during the same period.

Table I

TOTAL AND RURAL POPULATION IN THE
STATE OF NEW MEXICO BY TWO DIVISIONS

| Year | Counties largely within Upper Rio Grande * Area of Primary Concern | | Counties largely out- side Upper rio Grande** Area of Primary Con- cern* | |
|------|--|---------|---|---------|
| | Rural | Total | Rural | Total |
| | Number | Number | Number | Number |
| 1850 | 54,473 | 54,473 | 7,047 | 7,047 |
| 1860 | 56,880 | 61,515 | 32,001 | 32,001 |
| 1870 | 52,193 | 56,958 | 34,826 | 34,826 |
| 1880 | 64,479 | 71,114 | 48,451 | 48,451 |
| 1890 | 69,378 | 79,348 | 80,934 | 80,934 |
| 1900 | 82,203 | 94,044 | 85,726 | 101,266 |
| 1910 | 87,576 | 103,668 | 193,154 | 223,633 |
| 1920 | 91,536 | 113,929 | 203,854 | 246,421 |
| 1930 | 99,967 | 137,713 | 216,534 | 285,604 |

* Taos, Rio Arriba, Santa Fe, Sandoval, Bernalillo, Socorro,
Valencia

** All other counties of State of New Mexico

Compiled from the census by counties

[illegible]

The total population of the area of primary concern within the Upper Rio Grande Watershed shows an increase over the 80-year period, but a much smaller one than that of the population of the rest of the state; 153 per cent as opposed to 3953 per cent.

*

The rural population of the counties in the area shows an increase over the 80-year period of only 83 percent as opposed to almost 3000 per cent for the rural population of the rest of the state. Over the 40-year period from 1890 to 1930 the total population of the area of concern increased by 74 per cent, while the total population of the rest of the state increased by 204 per cent, and the total population of all the mountain states increased by 205 per cent. Rural population of the area of concern increased in that 40-year period by only 44 per cent as opposed to 168 per cent in the rest of the state.

No data are available on the annual excess of births over deaths or on migrations out of the area during the period 1850 to 1930. It is known, however, that there was some migration out of the area. It is known, in addition, that the annual migration to other areas for seasonal labor was, prior to 1929, quite extensive, involving as many as 9,000 to 12,000 persons. In addition, mining and other non-agricultural activity within the area itself expanded considerably. Where in 1850 some 1000 persons were engaged in non-agricultural activities, in 1930 over 25,000 persons were so engaged.

* The term "Rural" is used throughout this paper, in accordance with the present census definition, to denote population living in places of less than 2500 persons.

in the area under consideration. It seems safe to conclude therefore that already in 1850 the agricultural resources available to the rural village population of the area were supporting the maximum population that they could support.

The population of the entire Upper Rio Grande Watershed in 1930 is shown by physiographic subdivisions in Table II. Since the physiographic lines marking off these sub-areas cut across county lines, the data has been compiled by minor civil divisions rather than by counties. The population of the three sub-areas which together constitute the area of primary concern to the Committee is therefore here presented more accurately than in terms of the county figures used above. The distribution of the population is shown in Figure 3. As is evident population is concentrated for the most part along watercourses, principally along the Rio Grande and its tributaries. Wherever small pockets of irrigable land exist clusters of population are found.

TABLE II

POPULATION OF THE UPPER RIO GRANDE WATERSHED
BY MAJOR DIVISIONS AND BY SUB-AREAS, 1930

| Physiographic Divisions and Sub-areas | Rural Number | Urban Number | Total Number |
|--|-----------------|-----------------|-----------------|
| Areas of Primary Concern | | | |
| Jemez Tewa | 43,892 | 11,176 | 55,068 |
| Middle Rio Grande | 38,362 | 26,570 | 64,932 |
| Puerco | 10,174 | 0 | 10,174 |
| TOTAL | 92,428 | 37,746 | 130,174 |
| Areas of Secondary Concern | | | |
| San Luis Valley | 36,776 | 7,717 | 44,493 |
| Estancia Valley | 8,414 | 0 | 8,414 |
| Mesilla Valley | 79,318 | 118,224 | 197,542 |
| TOTAL | 124,508 | 125,941 | 250,449 |
| TOTAL WATERSHED | 216,936 | 163,687 | 380,623 |

Compiled from the census by minor civil divisions.

The total population of the area of primary concern, which is constituted by the Jemez-Tewa, Middle Rio Grande, and Puerco areas, is 130,174 or approximately one-third that of the entire watershed. The rural population of the area is 92,428 or over 40 per cent of that of the entire watershed.

The ethnic composition of the rural population in the area of primary concern in 1930 is shown in Table III.

TABLE III

ETHNIC COMPOSITION OF THE RURAL POPULATION OF THE
AREA OF PRIMARY CONCERN IN THE UPPER RIO GRANDE WATERSHED, 1930

| Area | Spanish-American ⁽¹⁾ | (2) Indian | (1) Anglo-American | Total |
|-------------------|---------------------------------|---------------|-----------------------|--------|
| Jemez-Tewa | 34,555 | 4,742 | 4,595 | 43,892 |
| Middle Rio Grande | 29,640 | 1,151 | 7,571 | 38,362 |
| Puerco | 5,679 | 3,123 | 1,372 | 10,174 |
| TOTAL | 69,874 | 9,016 | 13,538 | 92,428 |

(1) The number of Spanish-Americans in the total non-Indian population was calculated on the basis of estimates prepared by the State Health Bureau. The latter estimates by county were based upon the school censuses of 1932 and 1933.

(2) From the census taken by the Indian Service.

Spanish-Americans constitute 76 per cent of the rural population of the area, Indians 10 per cent and Anglo-Americans 14 per cent. Spanish-Americans constitute approximately 41 per cent of the urban population of the area, approximately 33 per cent of that of Albuquerque and 60 per cent of that of Santa Fe, the two urban places of the area, as indicated in Table IV.

TABLE IV

ETHNIC COMPOSITION OF THE URBAN POPULATION OF THE
AREA OF PRIMARY CONCERN IN THE UPPER RIO GRANDE WATERSHED, 1930

| Town | (1) | (1) | Total |
|-------------|------------------|----------------|--------|
| | Spanish-American | Anglo-American | |
| Albuquerque | 8,857 | 17,713 | 26,570 |
| Santa Fe | 6,706 | 4,470 | 11,176 |
| TOTAL | 15,563 | 22,183 | 37,746 |

- (1) The number of Spanish-Americans in the urban population was calculated on the basis of estimates prepared by the State Health Bureau. The latter estimates were based upon the school censuses of 1932 and 1933.

Within the area in 1930, then, there were approximately 85,000 Spanish-Americans as opposed to approximately 47,000 in 1850; 9,000 Indians as opposed to 6,400 in 1850; and approximately 36,000 Anglo-Americans as opposed to some 1,100 in 1850. It is



evident that considerable migration of Anglo-Americans into the area has occurred despite the limited resources and employment opportunities available to the native population of the area.

It is, of course, hazardous to make any predictions in regard to future changes in the population of the area. The following facts may be indicated, however. The birth rate⁽¹⁾ in the non-Indian rural population of Taos, Rio Arriba, Santa Fe, Sandoval and Bernalillo counties was, in 1930, 35.5. This is in contrast to a rate in that same year of 26.5 for the entire state of New Mexico. The latter rate was the highest of any state in the United States registration area in 1930.

The death rate⁽²⁾ for the non-Indian population of the five counties in 1930 was 17.3, as opposed to 15.5 for the entire state of New Mexico, again the highest rate in that year for any state within the registration area.

The infant death rate⁽³⁾ for the non-Indian population of the five counties in 1930 was 169, as opposed to 145 for the state as a whole. The latter was by far the highest rate for any state in the registration area of the United States.

The annual excess of births over deaths among the non-Indian population of the five counties averaged from 1930 to 1936 inclusive, 1412. This represented an average annual rate of increase of slightly over 2 per cent, one which would double the population in less than 50 years.

(1) Births per 1000 population

(2) Deaths per 1000 population

(3) Deaths of infants under 1 year of age per 100 live birth.

The number of children under 5 per 1000 women of child-bearing age in the five counties in 1930 was 654. In five different sample Spanish-American village clusters the number varied from 590 to 712; for the five village clusters together it was 651.

In sum, in the absence of sharp changes in birth and death rates, the rural Spanish-American population of the area appears likely to increase at a rapid rate, one which presages even more serious problems of adjustment to resources and labor opportunities than exists now.

The Indian population of the area increased from 1926 to 1936 by 16 per cent. From 1930 to 1936 the increase was over 11 per cent, the average annual rate of increase being just under 2 per cent, or slightly lower than that of the non-Indian rural population of the area. It appears that in the case of the Indian population too, in the absence of sharp changes in the birth and death rates, a substantial and rapid increase may be expected.

Migration out of the area is by no means the first resort of either the Spanish-Americans or Indians. There is considerable reason to believe that such migration would not occur except in the most drastic circumstances. Assuming that in any case uncontrolled migration is likely to be neither effective nor desirable, the recent and probable future trends of the native rural populations require serious consideration in any plans for adjustment in the area.

